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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

RETTA, YEHDEGA

ART UNIT	PAPER NUMBER
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3622

MAIL DATE	DELIVERY MODE
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10/31/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/846,823	Applicant(s) DUNNING ET AL.	
	Examiner Yehdega Retta	Art Unit 3622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-97 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-97 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/18/06</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Response to Amendment

This office action is in response to Request for Continued Examination filed August 22, 2008. Claims 1-97 are still pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4-14, 17-27, 32, 33, 39, 42-45, 48-59, 62-72, 75-85, 91 and 92 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hosken U.S Patent No. 6,438,579.

Regarding claim 1, Hosken teaches accepting, in a computer, item selections detected from a plurality of users; generating, in the computer, a log for each user, each log containing identifiers corresponding to detected user item selections (see '579' col. 3 lines 15-33) and (see '377' page 6 par. 1-5). *Hosken provisional '377' teaches the user profile table (user profile, user profile rating) contains identifying information about music items linked to a user, the information in this table can be provided using explicit rating information provided by the user or through implicit observation by the system based on user's actions (see also fig. 1);* accepting, in the computer, a query including at least one query item identifier; scoring, in the computer, each of the user logs, the scoring for each user log being responsive to a degree of occurrence of the at least one query item identifier in the user log, so as to generate user log

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score for each user log based exclusively on detected user item selections and the at least one query item (see '579' col. 12 line 35 to col. 13 line 6). *Hosken '377 also teaches accepting item selection (user choosing an item); generating user log (profile based on implicit and explicit rating data for music provided by users) containing identifiers (vectors) corresponding to detected user item (see pp 5 lines 6-20); accepting a query (selection) and scoring (correlating similarity between the user ratings and other users' rating and determining weigh for each item to give rating weight (see pp 11 line 4 to pp. 12 line 6); determining, in the computer at least one result item, responsive to a frequency of occurrence in at least a subset of the scored user logs, so as to discover at least one relationship based exclusively on detected user item selections and the at least one query item identifier in the user log, a frequency of occurrence of the at least one query item identifier relative to all of the user logs and a query weight for the at least one query item identifier in the query (see '579' col. 15 line 10 to col. 16 line 21, col. 16 lines 24-55); Hosken '377' also teaches being responsive to a degree of occurrence of the item identifier in the user logs (weight for each item determined by multiplying the correlation with the rating to give the correlated rating weight (pp 8 lines 14-25); determining at least one result item (recommendation) (see pp 10-13 and abstract and fig. 2b to fig. 5).*

Hosken also teaches that the explicit information provided by users provides high-confidence information that can be incorporated into the group and individualized collaborative data. Hosken teaches that implicit and explicit profiling data is used to provide recommendation (see col. 4 lines 44-67). Hosken discloses that the user may explicitly enter music items and ratings or the system may derive implicit ratings of music items based on system-based observations (detected) of user actions and the system making recommendation based on the

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input (see col. 14 lines 13-20). It would have been obvious to one of ordinary skill in the art at the time of the invention to implement selected features of Hosken. Omitting Hosken's collection of explicit user profile, by interviewing or surveying users, would cost less to operate the system. Also it would have been obvious to one of ordinary skill in the art to provide recommendation from implicit user profile only to those who are not willing to participate in the interview or survey of Hosken. It is also well settled that the elimination of an element or its functions is an obvious expedient if the remaining elements perform the same functions as before - *In re Karlson*, 136 USPQ 184, 186; 311 F2d 581 (CCPA 1963).

Regarding claims 4-11, Hosken teaches video track or music track, generating track list containing an identifier for each determined result. Hosken teaches recommending music and video and other media content items based on similarity in profile between the user and other users (see '579' col. 12 line 38 to col. 13 line 30, *see '377' page 6, 12*).

Regarding claims 12 and 13, Hosken teaches accepting selection; input specifying an item purchase by user, provided via web page (see '579' col. 4 lines 11-55, col. 5 lines 20-62, *see '377' page 7 and fig. 3*).

Regarding claim 14, Hosken teaches defining a subset of the scored user logs (see '579' col. 15 line 10 to col. 16 line 21, *see '377' page 10 & 11*).

Regarding claim 17, Hosken teaches wherein accepting item selections comprises receiving input provided by a user via an application for playing tracks (see '579' col. 4 lines 11-15, col. 5 lines 20-62, *see '377' page 7, 12 and fig. 3*).

Regarding claims 18-21, 48-53 and 75-79, Hosken teaches wherein accepting a query comprises receiving a user log containing identifiers for a user's item selections; wherein

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accepting a query comprises receiving a first search term, generating, in the computer, a second search term containing an identifier for each determined result item; providing, in the computer, the second search term as input for a search engine; and adding, in the computer, the second search term to a searchable portion of a document associated with the first search term; periodically uploading the generated log (see '579' col. 8 lines 38-65, *see '377' page 8 & 9*).

Regarding claims 22-27, 54-58 and 80-85 Hosken teaches outputting advertisement related to the determined result (see '579' col. 8 lines 38-53, col. 16 lines 24-53, *see '377' page 7 & 12*).

Regarding claims 32 and 33, Hosken teaches deleting item selected by user from the determining at least one result, ranking the result responsive to the degree of significance (see col. 16 lines 24-53, *see '377' page 12*).

Claims 39 and 59 are rejected as stated above in claim 1.

Claims 42-45 and 62-69 are rejected as stated above in claims 4-11.

Claims 70 and 71 are rejected as stated above in claims 12 and 13.

Claim 72 is rejected as stated above in claim 14.

Claims 91 and 92 are rejected as stated above in claims 32 and 33.

Claims 2, 3, 28-31, 34-38, 40, 41, 60, 61, 86-90, 93-97 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hosken U.S. Patent No. 6,438,579 further in view of Lazarus U.S. Patent No. 6,430,539.

Regarding claims 2, 3, 40, 41, 60, 61 and 86 Hosken does not explicitly teach significance of occurrence being determined by a log of likelihood ratio analysis or a substantial

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equivalent of a log of likelihood ratio analysis, it is taught by Lazarus (see col. 22 line 19 to col. 25 line 53). Lazarus teaches use of a log of likelihood ratio or an equivalent analysis to determine significance of occurrence (see abstract, col. 4 lines 24-67 and col. 39 lines 13-53). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to use Lazarus's predictive model in Hosken's recommendation system since a log of likelihood ratio or equivalent ratio analysis overcomes the problem of small count situations and have much better small count behavior while at the same time retaining the same behavior in the non-small count regions as taught by Lazarus (see col. 24 line 44 to col. 25 line 38).

Regarding claims 28-31, 34-38, 87-90, 93-97, Hosken teaches determining a total number of users, each group containing information detected from implicit use behavior, (see fig. 2 (70, 68, 64)); determining a subset of user, determining the items selected or not selected by the subsets and use of correlation algorithm to determine the correlation between the cluster and the user (see col. 15 line 10 to col. 16 line 21). However Hosken failed to explicitly teach the correlation algorithm as a log likelihood ratio, it is disclosed in Lazarus (see abstract, col. 4 lines 24-67 and col. 39 lines 13-53). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to use Lazarus's predictive model in Hosken's recommendation system since a log of likelihood ratio or equivalent ratio analysis overcomes the problem of small count situations and have much better small count behavior while at the same time retaining the same behavior in the non-small count regions as taught by Lazarus (see col. 24 line 44 to col. 25 line 38). Hosken discloses that the user may explicitly enter music items and ratings or the system may derive implicit ratings of music items based on system-based observations of user actions and the system making recommendation based on the input (see col. 14 lines 13-20). It

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would have been obvious to one of ordinary skill in the art at the time of the invention to implement selected features of Hosken. Omitting Hosken's collection of explicit user profile, by interviewing or surveying users, would cost less to operate the system. Also it would have been obvious to one of ordinary skill in the art to provide recommendation from implicit user profile only to those who are not willing to participate in the interview or survey of Hosken.

Claims 15, 16, 46, 47, 73 and 74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hosken U.S. Patent No. 6,438,579 further in view of Ward U.S. Patent No. 6,526,411.

Regarding claims 15, 16, 46, 47, 73 and 74, Hosken '377' failed to explicitly teach monitoring user behavior by detecting user input ... Ward teaches selecting tracks based on users profiles including the user dislikes for a particular item either by skipping or through rating (**see col. 8 lines 20-40 see also provisional 60165727, page 2-5**). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to modify Hosken's recommendation system by making the selection of tracks based on how often the track was played or based on when the last time the track was played, as in Ward's, in order to improve the recommendation system by refining user preference.

Response to Arguments

Applicant's arguments filed August 22, 2008 in regard to the art rejection have been fully considered but they are not persuasive. Applicant argument in regard to the 112 rejection provided clear explanation that the "user logs" refers to the user logs that are generated for the plurality of users, i.e., one log for each user, "user logs", which means not a several logs of one user. Based on the interpretation of the term as logs for several users, the rejection of the 112 is

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withdrawn. Applicant asserts that in the current Office Action, the Examiner has eliminated some of the portions of Hosken previously relied upon to reject Claims 1, 39 and 59, i.e., the Examiner now only relies on col. 3, lines 15 to 33 and col. 14, lines 13 to 20 of Hosken to reject Claims 1, 39 and 59. In her grounds for rejecting Claims 1, 39 and 59, the Examiner also cites Figure 1 and page 6, paragraphs 1 to 5 in her rejection of Claims 1, 39 and 59. Applicant requests the Examiner to clarify *whether she is citing the portions of the '377 Hosken provisional against Claims 1, 39 and 59, and to further clarify whether she considers page 6, paragraph 1 to 5 of the '377 Hosken provisional to provide the requisite showing of § 112 support for col. 3, lines 15 to 33 and col. 14, lines 13 to 20 of Hosken.* Applicant also requests the Examiner to provide similar clarification for each reference to the '377 Hosken provisional made by the Examiner in her grounds for rejection of the other claims, should the Examiner maintain her current rejection.

Applicant also asserts that "(i)t is clear from MPEP § 2136.03(III) that the burden lies with the Examiner to provide a showing. In the interest of advancing prosecution, although not intended to be an exhaustive and complete listing, the Applicant provides the following examples of Hosken '579 taken from the cited portions of Hosken '579 which the Applicant believes lack an enabling description in the ' 377 Hosken provisional. Applicant indicates that at col. 5, lines 20-62, Hosken '579 refers to "individual and collaborative profiles", while the '377 Hosken provisional only refers to a user profile.

Examiner have already addressed applicant argument and provided a showing (see "Final Rejection" filed 5/31/07, "Non-Final Rejection" mailed 11/20/07, "Final Rejection" mailed 5/22/08).

As indicated before by the Examiner, according to MPEP “The later-filed application must be an application for a patent for an invention which is also disclosed in the prior application (the parent or original nonprovisional application or provisional application); the disclosure of the invention in the prior application and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112”.

“Accordingly, the disclosure of the prior-filed application must provide adequate support and enablement for the claimed subject matter of the later-filed application in compliance with the requirements of 35 U.S.C. 112, first paragraph”. “Claiming the Benefit of Provisional Applications Under 35 U.S.C. 119(e), the written description and drawing(s) (if any) of the provisional application must adequately support and enable the subject matter claimed in the nonprovisional application that claims the benefit of the provisional application. For a nonprovisional application to be afforded the priority date of the provisional application, “the specification of the provisional must contain a written description of the invention and the manner and process of making and using it, in such full, clear, concise, and exact terms,’ 35 U.S.C. § 112 ¶1, to enable an ordinarily skilled artisan to practice the invention claimed in the nonprovisional application”. Applicant asserts that “(i)t is clear from MPEP § 2136.03(III) that the burden lies with the Examiner to provide a showing.”

There is no requirement for the provisional and the nonprovisional application to match word by word or page by page. The requirement is that the written description of the provisional application must adequately support and enable the subject matter claimed in the nonprovisional application and the specification of the provisional application must contain a written description of the invention and the manner and process of making and using, in such full, clear, concise and

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exact terms to enable an ordinarily skilled artisan to practice the invention claimed in the nonprovisional application.

The Examiner has already indicated adequate support and enablement, in Hosken's '377 provisional, **for applicant's claimed subject matter**.

Regarding the "Collaborative Recommendation" the Examiner has already addressed it in the previous office actions.

In regard to claim 34 and 93 Examiner have already addressed applicant's argument. Applicant argues that Lazarus does not cure the above note deficiencies of Hosken, and thus the combination fails to teach or suggest all of the elements of the claims rejected based upon a Hosken/Lazarus combination. Applicant states that in view of the above discussion it should be clear that any rejection of the claims in Hosken '579 is improper. Examiner has already addressed the issue in regard to the Hosken. In regard to Ward, applicant asserts that it is necessary to provide a showing, in accordance with 35 U.S.C. § 112, first paragraph, that the subject matter of Ward relied upon in making the rejection is fully supported by the description found in one or more of the provisional applications to which Ward claims priority. Applicant asserts that since no such showing has been made, the rejection based on Ward should be withdrawn. However Examiner has already indicated that pages 2-5 of Ward's provisional 60165727 provide support for the claimed invention.

Applicant argues that the '377 Hosken provisional identifies a user profile as consisting of information identifying a music item *and a user's explicit rating for the music item*. Applicant asserts the '377 Hosken provisional lacks any disclosure, enabling or otherwise, as to how user profile information or user profile rating information, is derived from implicit observation of

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users' action. The '377 provisional fails to provide any disclosure that would enable one of ordinary skill to use observed behavior, or ratings information derived from observed behavior, to make a recommendation. Applicant states “(i)n response to the Applicant's previous remarks, the Examiner contends that Figures 1 to 5 and pages 5 and 8 to 12, of the '377 Hosken provisional provides "ample disclosure and enablement on how the user implicit observation is used to provide [a] recommendation." A review of the referenced portions of the '377 Hosken provisional fails to identify any discussion of implicit behavior beyond a cursory mention that information in the user profile table can be provided through implicit observation of the system based on users' actions. The '377 Hosken provisional requires that each item have a rating to make a recommendation, and the '377 Hosken provisional has no disclosure, enabling or otherwise, as to how users' actions is used to generate or otherwise provide a rating. In fact, the only description in which a rating is provided in the '377 Hosken provisional is in the case that the user provides an explicit rating. There is nothing in the portions of the '377 Hosken provisional that describes how a user profile rating is generated from implicit user behavior. Should the Examiner maintain her position in this regard, the Application respectfully requests the Examiner to identify the specific portion of the '377 Hosken provisional that the Examiner believes describes, and provides an explanation of, how a rating is generated from users' actions in the '377 Hosken provisional”.

In regard to Applicant's argument that the Examiner is required to show how a rating is generated from user's actions, Examiner points out that '377 Hosken on page 6 teaches " The User Profile (user profile, user profile rating) contains identifying information about music items

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linked to a user. *The information in this table can be **provided using explicit rating information** provided by the user **or** through implicit observation by the system based on user's actions".*

Examiner also would like to point out that according to MPEP "If elements of an invention are well known in the art, the applicant does not have to provide a disclosure that describes those elements. Information which is well known in the art need not be described in detail in the specification. See, e.g., *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1379-80, 231 USPQ 81, 90 (Fed. Cir. 1986) *In re Wands*, 858 F.2d at 737, 8 USPQ2d at 1404 (Fed. Cir. 1988). See also *United States v. Teletronics, Inc.*, 857 F.2d 778, 785, 8 USPQ2d 1217, 1223 (Fed. Cir. 1988) ("The test of enablement is whether one reasonably skilled in the art could make or use the invention from the disclosures in the patent coupled with information known in the art without undue experimentation."). A patent need not teach, and preferably omits, what is well known in the art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yehdega Retta whose telephone number is (571) 272-6723. The examiner can normally be reached on 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Stamber can be reached on (571) 272-6724. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

YR

/Yehdega Retta/
Primary Examiner, Art Unit 3622